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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ARCHER, CHRISTOPHER B

ART UNIT

PAPER NUMBER

4148

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/543,124	Applicant(s) HOCHFIELD ET AL.	
	Examiner CHRISTOPHER B. ARCHER	Art Unit 4148	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of undue length. Correction is required. See MPEP § 608.01(b).

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.

- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

4. Claims 7-12 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 12 refers to page encryption and MAC, which do not have proper antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 4148

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schwartz (US Patent No. 4,985,921), hereafter referred to as Schwartz.

Regarding claim 1:

Schwartz teaches "A smartcard comprising a substrate having a smartcard chip thereon, the smartcard being characterized in that it comprises a secondary memory device on the substrate and operatively connected to the smartcard" as [Schwartz (column 2, lines 32-35, 45-46 and Fig 1.) shows a smartcard containing a secondary memory chip attached to a primary processing chip].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz as applied to claim 1 above, and further in view of Barnett (US Patent No. 6,108,236), hereafter referred to as Barnett.

Regarding claim 2:

Schwartz teaches "A smartcard according to claim 1," but fails to explicitly disclose "wherein the secondary memory device is a FLASH ROM."

However, Barnett teaches "wherein the secondary memory device is a FLASH ROM," as **[Barnett (column 3, lines 13-15) shows that FLASH memory is commonly used as a smartcard memory device]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the teaching of Barnett into Schwartz's as both are analogous art from the same field of endeavor of smart card manufacture.

The ordinary skilled person would have been motivated to apply the teaching of Barnett into Schwartz's, since Barnett specifies the advantages in using FLASH memory in a smart card device.

9. Claims 3, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz as applied to claim 1 above, in view of Takahira (US Patent No. 4,930,129), hereafter referred to as Takahira, and further in view of Mo et al (US Patent No. 5,754,565), hereafter referred to as Mo.

Regarding claim 3:

Schwartz teaches "A smartcard according to claim 1" but fails to explicitly disclose "wherein the secondary memory device is capable of storing a plurality of pages of data, each having associated with it a unique sequence number, the sequence number being stored separately from the data page so that when the

page is to be read, the sequence number retrieved with the page can be compared with the stored sequence number to authenticate the page.”

However, Takahira teaches “wherein the secondary memory device is capable of storing a plurality of pages of data” as **[Takahira (Fig 1 and column 4, lines 44-52) shows a memory device that is divided into a plurality of data pages]**, “the sequence number being stored separately from the data pages” as **[Takahira (Fig 1 and column 4, lines 48-52) shows a plurality of data pages contained within two different sections, one containing directory and ECC information and the other containing the related data; (column 5, lines 37-41) shows the creation of the ECC data]**, “so that when the page is to be read, the sequence number retrieved with the page can be compared with the stored sequence number to authenticate the page” as **[(Takahira column 5, lines 34-49) shows the computer performing error checking calculations from information in both the microprocessor and in the memory card]**, but fails to explicitly disclose “each having associated with it a unique sequence number.”

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the teachings of Takahira into Schwartz’s as both deal with the common field of secure data carrying devices.

The ordinary skilled person would have been motivated to apply the teaching of Takahira into Schwartz's, since Takahira adds an organization and error checking scheme for stored data.

Furthermore, Mo teaches "each having associated with it a unique sequence number" as **[Mo (column 1, lines 35-44) shows that each data segment has a unique ECC appended to it]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the teachings of Mo into Schwartz's in view of Takahira as both deal with the common field of endeavor of information protection and validation.

The ordinary skilled person would have been motivated to apply the teaching of Mo into Schwartz's in view of Takahira, since Mo adds an error checking scheme for stored data.

Regarding claim 4:

Takahira further teaches "A smartcard according to claim 3, wherein the stored sequence number is stored in the smartcard chip" as **[Takahira (Fig 1 and column 4, 48-52) shows that the ECC values are stored in the memory inside the single smartcard chip]**.

Regarding claim 5:

Takahira and Schwartz further teach "A smartcard according to claim 3 wherein some of the stored sequence numbers are stored in at least one page of the plurality of pages of data stored on the secondary memory device, the sequence number for that at least one page being stored in the smartcard chip"

as [(Takahira Fig 1 and column 4, lines 48-52) shows a plurality of data pages contained within two different logical sections of memory, one containing directory and ECC information and the other containing the related data. (Schwartz Fig 1 and column 2, lines 32-35, 45-46) shows a smartcard containing a secondary memory chip attached to a primary processing chip.

Since Takahira shows that a logical partition of a memory chip can contain ECC and directory information, any number the pages in the secondary memory chip could be adapted in this manner to store a plurality of ECC and directory information pointing to separate logical portions of the same chip.

In this manner, the primary memory chip would have directory and ECC values that correspond to page headers in the secondary memory chip. The information in the corresponding pages can also be directory and ECC information pointing to different sections of the second memory chip].

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz, Takahira, and further in view of Mo, and further in view of Corrigan et al. (US Patent No. 5,897,662), hereafter referred to as Corrigan.

Regarding claim 6:

Schwartz, Takahira, and Mo teach “a smartcard according to claim 3” but fail to explicitly disclose “wherein the sequence numbers are XOR’d to produce a digest or HASH which is stored in the smartcard EEPROM.”

Corrigan further teaches “wherein the sequence numbers are XOR’d to produce a digest or HASH which is stored in the smartcard EEPROM” as **[Corrigan (column 5, lines 44-52) shows that XOR operations are frequently used to associate specific sets of virtual addresses with specific portions of the table].**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the teachings of Corrigan into Takahira’s as both deal with the common field of endeavor of memory management.

The ordinary skilled person would have been motivated to apply the teaching of Corrigan into Takahira's, since Corrigan adds enhanced address allocation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER B. ARCHER whose telephone number is (571)270-7308. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Thomas Pham can be reached on (571)272-3689. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4148

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. B. A./
Examiner, Art Unit 4148

/THOMAS K PHAM/
Supervisory Patent Examiner, Art Unit 4148